



BSI Standards Publication

Electrostatics

Part 4-11: Standard test methods for specific applications —
Testing of electrostatic properties of composite IBC

National foreword

This British Standard is the UK implementation of EN IEC 61340-4-11:2025. It is identical to IEC 61340-4-11:2025.

The UK participation in its preparation was entrusted to Technical Committee GEL/101, Electrostatics.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Electrostatics - Part 4-11: Standard test methods for specific applications - Testing of electrostatic properties of composite IBC
(IEC 61340-4-11:2025)

Électrostatique - Partie 4-11 : Méthodes d'essai normalisées pour des applications spécifiques - Essais des propriétés électrostatiques des GRV composites
(IEC 61340-4-11:2025)

Elektrostatik - Teil 4-11: Standard-Prüfverfahren für spezielle Anwendungen - Prüfung der elektrostatischen Eigenschaften von Kombinations-IBC (RIBC)
(IEC 61340-4-11:2025)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

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The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2026-05-31 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2028-05-31 document have to be withdrawn

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60079-32-2:2015 NOTE Approved as EN 60079-32-2:2015 (not modified)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC/TS 60079-32-1	2013	Explosive atmospheres - Part 32-1: Electrostatic hazards, guidance	CLC/TR 60079-32-1	2018
+ A1	2017			
IEC 61010-1	-	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements	EN 61010-1	-
IEC 61010-2-030	-	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-030: Particular requirements for equipment having testing or measuring circuits	EN IEC 61010-2-030	-
ISO 48-4	-	Rubber, vulcanized or thermoplastic - Determination of hardness – Part 4: Indentation hardness by durometer method (Shore hardness)	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROSTATICS –

**Part 4-11: Standard test methods for specific applications –
Testing of electrostatic properties of composite IBC**

FOREWORD

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IEC 61340-4-11 has been prepared by IEC technical committee 101: Electrostatics. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
101/723/FDIS	101/727/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all the parts in the IEC 61340 series, published under the general title *Electrostatics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

Rigid Intermediate Bulk Containers (RIBC), including composite IBC, are widely used for storage, transportation and handling of liquids.

Only composite IBCs are considered in this part of IEC 61340. The detailed definition of composite IBC is specified in 6.5.1.3.4 of [1]¹. Composite IBC with plastic inner receptacles comprises a rigid outer casing surrounding a plastic inner receptacle, together with appropriate service and structural equipment. The assembled outer casing and inner receptacle form an integral unit for filling, storage, transportation and emptying.

The inner receptacle is not intended to perform a containment function without its outer casing. A "rigid" inner receptacle is a receptacle which retains its general shape when empty without closures in place and without benefit of the outer casing. Any inner receptacle that is not "rigid" is considered to be "flexible" (see 6.5.5.4.2 of [1]).

Usually such a receptacle is made of HDPE (High Density Polyethylene) which shows a good chemical resistance to various liquids. The volume is usually between 0,5 m³ and 1,3 m³ and is typically 1 m³.

HDPE is an electrically insulating material which can become electrostatically charged. Often the liquid inserted into a composite IBC is also electrically insulating. High electrostatic charges can occur during filling and emptying processes and remain for a long period of time. An ignition hazard can occur which is why electrostatically unprotected composite IBC are not used in hazardous areas. Electrostatic protected IBCs are designed to be safe for use in hazardous areas.

¹ Numbers in square brackets refer to the Bibliography.